

# IETMs

The ABCs of CECOM's IETMs

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9 June 2004



# Act I

In the beginning...

there was nothing...

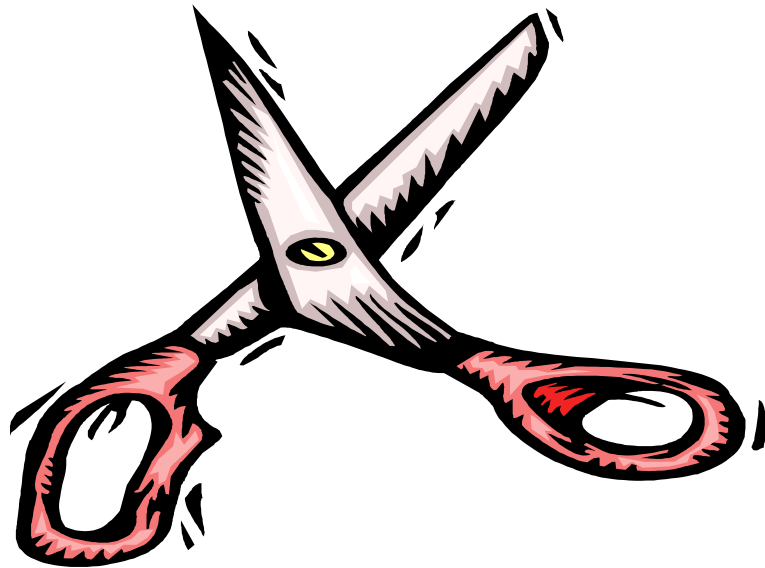
Moving right along...  
first there was rock



And then there was paper



And finally scissors 😊



*Rock, paper, scissors...shoot!  
hahahaha*

# Thick as a brick

Paper isn't dumb

...well it's not useless anyway



- Paper bends, and folds and doesn't need batteries.
- Paper is familiar, and the foreseeable future has lots of paper in it.
- Only enclosed environments like subs and spaceships can be paperless

# Time Marches On – Yet...



With all of the emphasis on IETMs, it may be easy to forget that page oriented formatting is still very important for readability

And for some people paper will always be better

# New Times - New Rules



Some parts of the paper paradigm are most useful, but things like spelling may be somewhat secondary

*Check the next slide...*

# You don't need to spell correctly

(copied with permission TPSMG Clearwater 2004 - Page-oriented delivery)

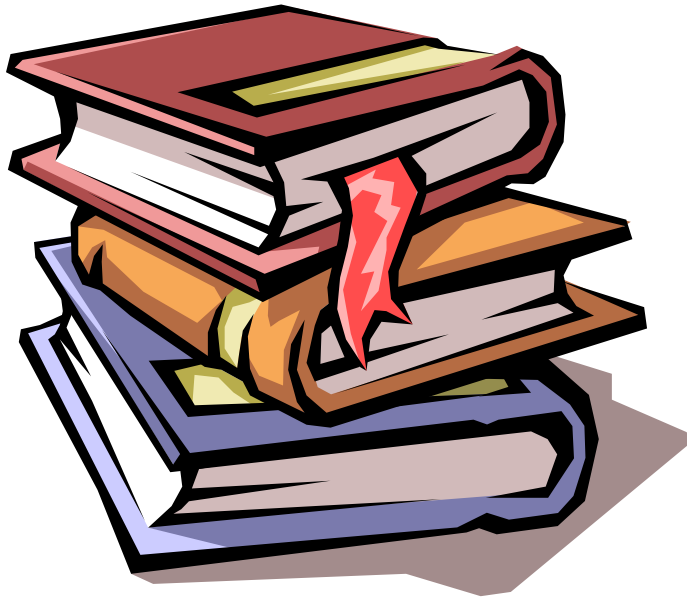
According to a research at Cambridge University, it doesn't matter in what order the letters in a word are, the only important thing is the first and last letter be at the right place. The rest can be a total mess and you can still read it without problem. This is because the human mind does not read every letter by itself, but the word as a whole.

# Progress doesn't mean we throw the baby out with the bath water

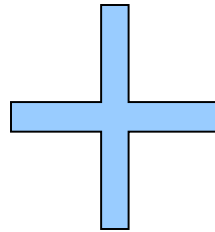


- **All of this new technology in no way removes the need for paper**
- **On the other hand there's no need to cling so tightly to it either**

# 00101 Ways to Making Paper Smarter



1083 Tech Writer



1550 Computer Science  
Specialist

# **IETM**

## **Interactive Electronic Technical Manual**



# XML Computer Science Brings Technological Acronym

Soup

XSL

CGM

Per

DSX

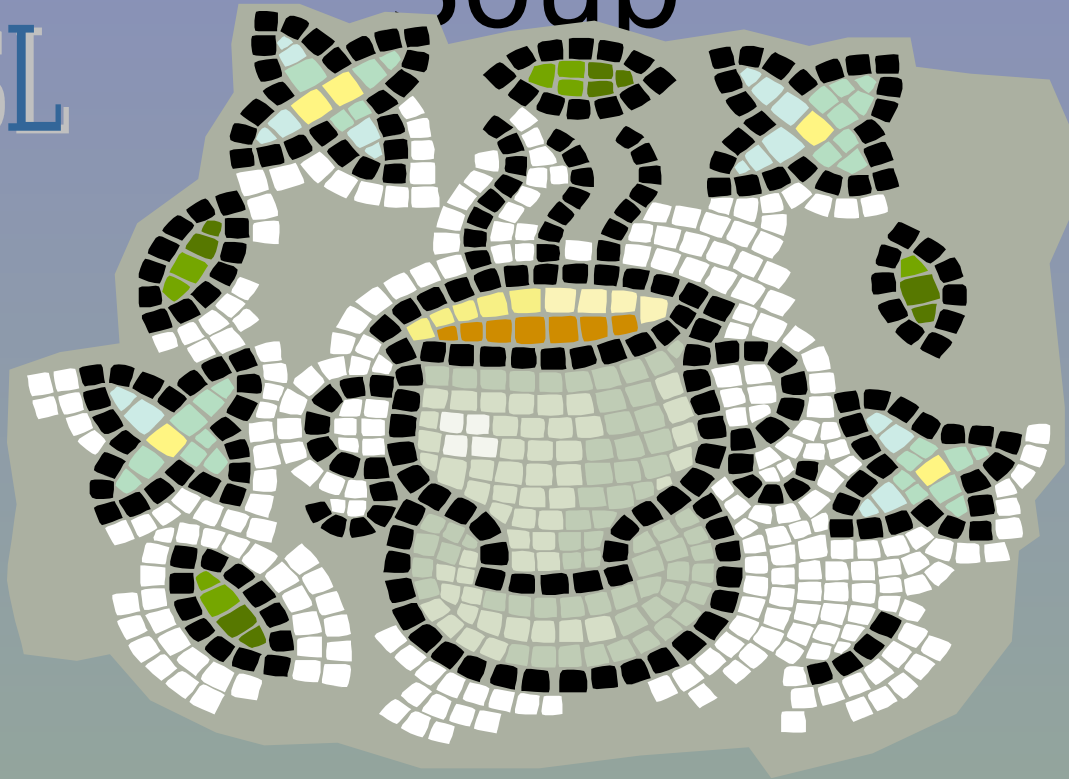
DS

SVG

GENT

XSL:FO

PNG



# How Smart is Smart?

| AIA Functionality Matrix - Combined |       |                                                           |
|-------------------------------------|-------|-----------------------------------------------------------|
| Page#                               | Line# | Category / Functionality                                  |
| 1                                   | 2     | 2AC Tracking/Security Access                              |
| 1                                   | 3     | 3AC SupraSense and Restat*                                |
| 1                                   | 4     | 4AC User creation of bookmarks                            |
| 1                                   | 2     | 2AN Local Data Annotation                                 |
| 1                                   | 1     | 1AN Personal Annotation                                   |
| 1                                   | 3     | 3AN Global Data Annotation                                |
| 1                                   | 3     | 3AD Redlining                                             |
| 1                                   | 1     | 1DD CD-ROM                                                |
| 1                                   | 2     | 2DD Network Distribution                                  |
| 1                                   | 1     | 1DP Diagnostics - User Determined Entry to ETM            |
| 2                                   | 2     | 2DP Diagnostics - Software Driven Entry to ETM            |
| 1                                   | 4     | 4DP Dynamic Diagnostics                                   |
| 4                                   | 4     | 4DP WheelPath System Tracing                              |
| 4                                   | 4     | 4DP System Simulation                                     |
| 5                                   | 5     | 5DP Prioritization                                        |
| 6                                   | 2     | 2EP EXTERNAL PROCESSES - Renewal                          |
| 2                                   | 2     | 2ET Supporting Technical Data                             |
| 3                                   | 3     | 3ET EXTERNAL PROCESSES - Transmittal                      |
| 3                                   | 3     | 3ET Deficiency Report Transmittal                         |
| 3                                   | 3     | 3EM Maintenance Data Collection                           |
| 3                                   | 3     | 3EO Operator Debriefing                                   |
| 3                                   | 3     | 3EP Parts Ordering                                        |
| 3                                   | 3     | 3ES Resource Scheduling                                   |
| 3                                   | 3     | 3EK Knowledge Management                                  |
| 1                                   | 1     | 1G Plan, Zoom, Expand, Magnify                            |
| 1                                   | 1     | 1GG Loc-ator graphics                                     |
| 4                                   | 4     | 4GA Assembly/Disassembly                                  |
| 4                                   | 4     | 4GM 3D Modeling                                           |
| 1                                   | 1     | 1L Table of Contents, Lists of Figures, Tables and Photos |
| 1                                   | 1     | 1LI Internal References                                   |
| 2                                   | 2     | 2LR Help Reference                                        |
| 2                                   | 2     | 2LL Link To Separate Parts Data                           |
| 2                                   | 2     | 2LN Nesting                                               |
| 2                                   | 2     | 2NH History of Traversed Links                            |
| 3                                   | 3     | 3NL Logical Next and Back                                 |
| 1                                   | 1     | 1N System's Subsystem Navigation                          |
| 2                                   | 2     | 2NT Audit Trail                                           |
| 2                                   | 2     | 2NG Graphical Navigation                                  |
| 2                                   | 2     | 2NS Simultaneous display of multiple content elements     |
| 2                                   | 2     | 2NW Window Capability                                     |
| 2                                   | 2     | 2NI Database Interaction                                  |
| 3                                   | 3     | 3NC Voice Activated Commands                              |
| 2                                   | 2     | 2NV Key Word Search                                       |
| 1                                   | 1     | 1NT Full Text Search                                      |
| 1                                   | 1     | 1NU User Defined Boolean Searches                         |
| 2                                   | 2     | 2NF Context Search                                        |
| 2                                   | 2     | 2NS Search Across multiple databases/files                |
| 2                                   | 2     | 2NM Filter by Model Series                                |
| 2                                   | 2     | 2IN Filter by Unique Identification Code                  |
| 2                                   | 2     | 2IF Filter by Configuration                               |
| 2                                   | 2     | 2IM Filter by Modification                                |
| 1                                   | 1     | 1P Print Screen                                           |
| 2                                   | 2     | 2P Print Linked Data                                      |
| 1                                   | 1     | 1R Data Module or Element Specific Printing               |
| 1                                   | 1     | 1RP Fully Formatted Book Version                          |
| 1                                   | 1     | 1IS Alert Manner                                          |
| 1                                   | 1     | 1S Alerts                                                 |
| 3                                   | 3     | 3S Content Sensitive Help                                 |
| 2                                   | 2     | 2S Context (Viewer HELP) Sensitive Help                   |
| 3                                   | 3     | 3SS User Training                                         |
| 3                                   | 3     | 3SP Photos                                                |
| 2                                   | 2     | 2SA Audio                                                 |
| 3                                   | 3     | 3SM Motion Video                                          |
| 4                                   | 4     | 4S Animation                                              |
| 1                                   | 1     | 1U Full Release                                           |
| 2                                   | 2     | 2U Bold Cycle with Urgent Changes                         |
| 1                                   | 1     | 1UP Passive Change Indicators and markings                |
| 2                                   | 2     | 2UR Active Change Indicators and markings                 |
| 2                                   | 2     | 2UL New Item Updates                                      |

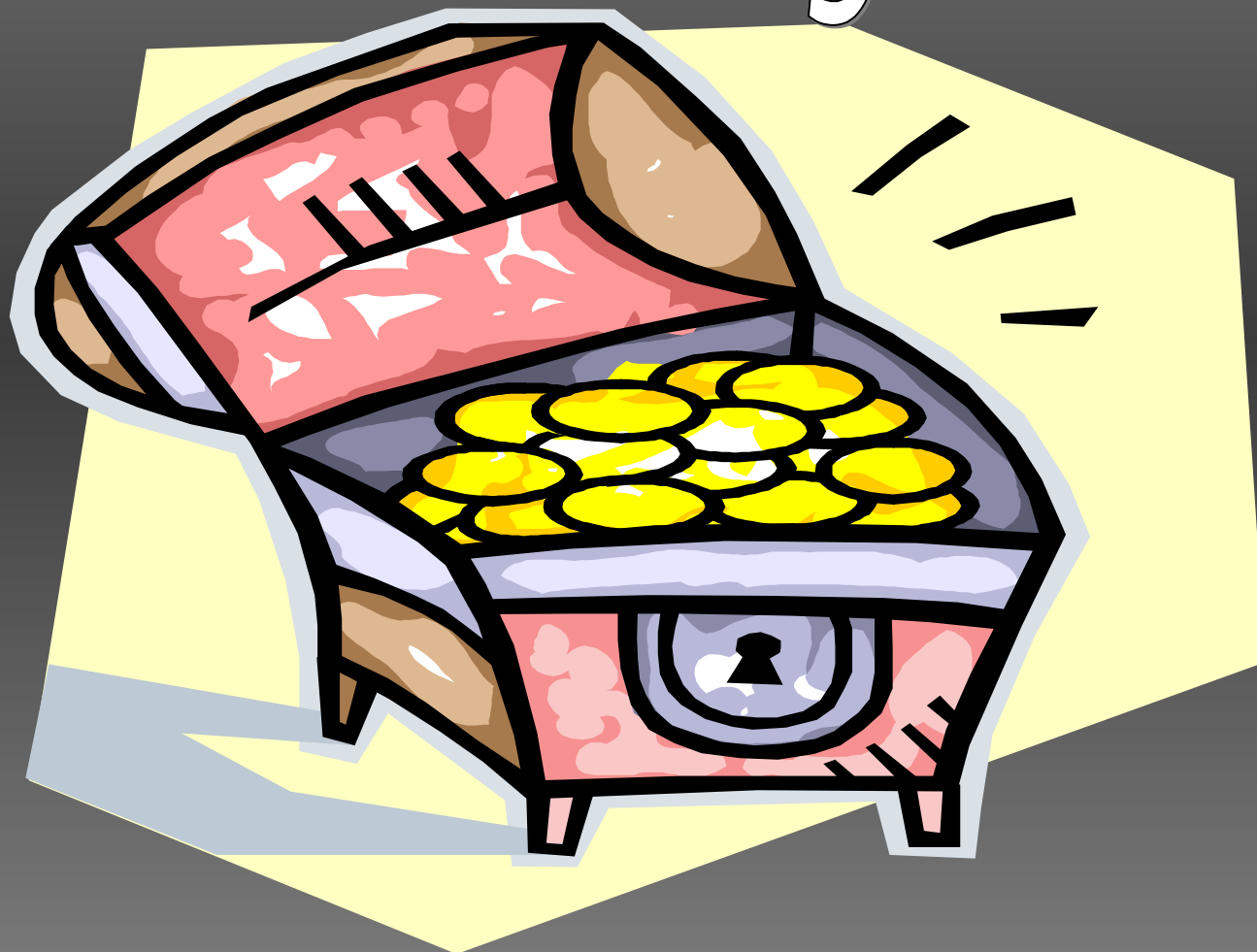
The AIA Functionality Matrix is an easy to understand (cough) comprehensive means of communicating what's desired

*That sounds great!  
I'd like one of each!*



and the contractors say...

*Ka-Ching!*



# What can we afford?



CECOM currently provides a base set of functionalities at no cost (GFI to the contractor)

There is constant development of new functionalities in-house and through contracts

# **Free? Did you say Free!?!**



**CECOM's philosophy  
is to develop  
reusable, open and  
shareable tools and  
functionalities to  
minimize the  
initial cost of  
development as  
well as the total  
cost of ownership.**

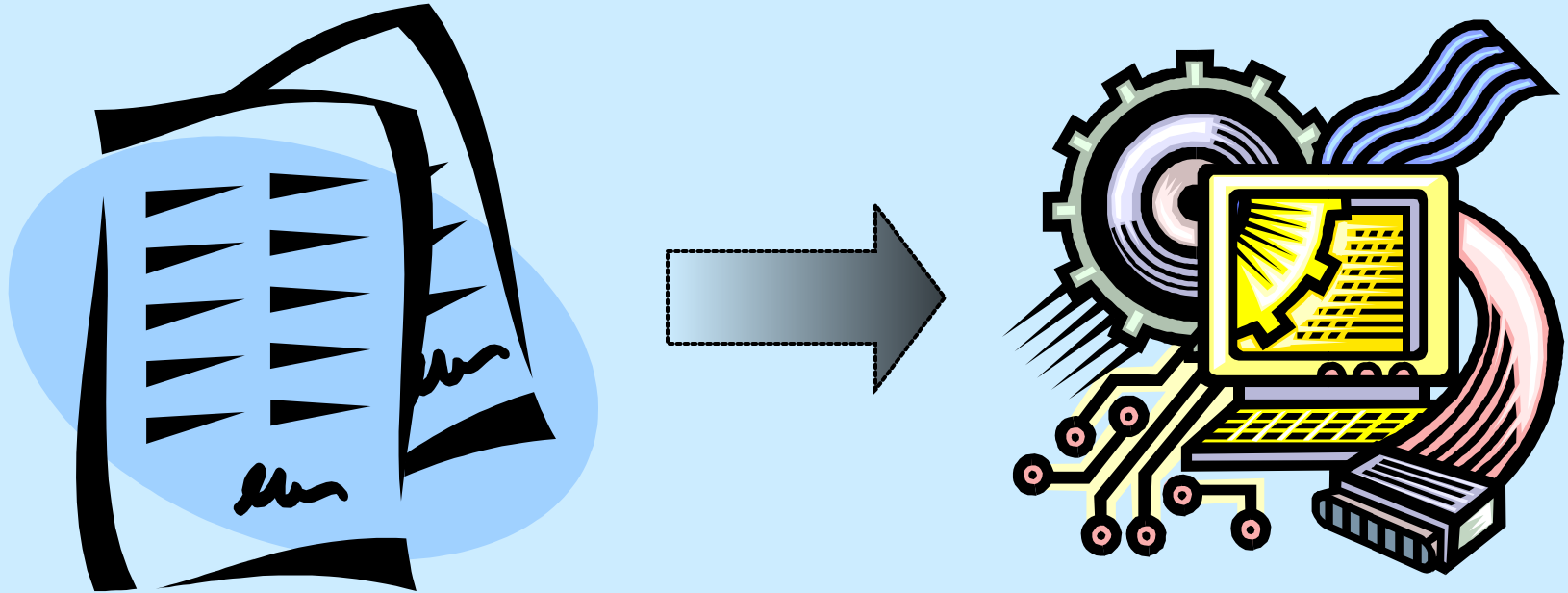
**Why? You ask.**

# Tech Pubs Funding in the Army



OK, so it's not that bad, actually there is a bit of money for...

# Conversion of Legacy TMs Paper to XML



A vibrant, stylized illustration of a sailboat with a grey sail and a brown hull, sailing on a blue sea. The sea is decorated with a pattern of small blue and brown circles. In the background, there is a bright yellow sun with rays in the top right corner, a compass rose with a star in the bottom right corner, and a small figure on the sailboat looking through a telescope. The text "Times are Changing. Where are We Going Anyway?" is written in a bold, black, sans-serif font across the center of the image.

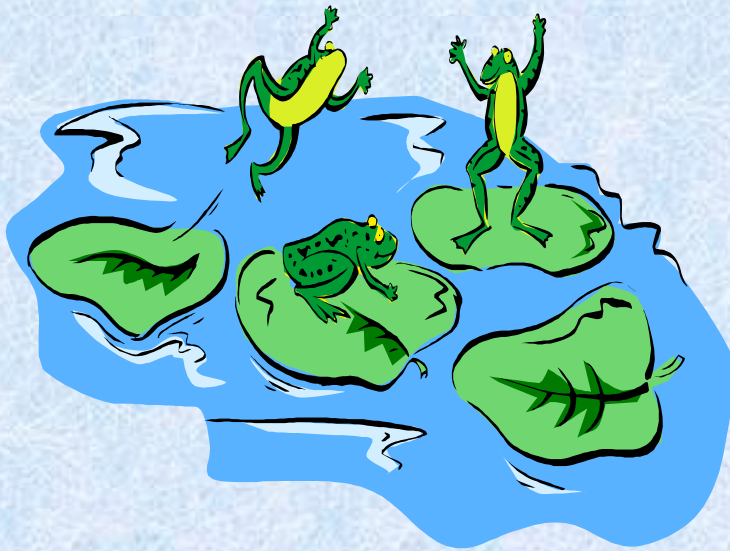
Times are Changing.  
Where are We Going  
Anyway?



# Act II

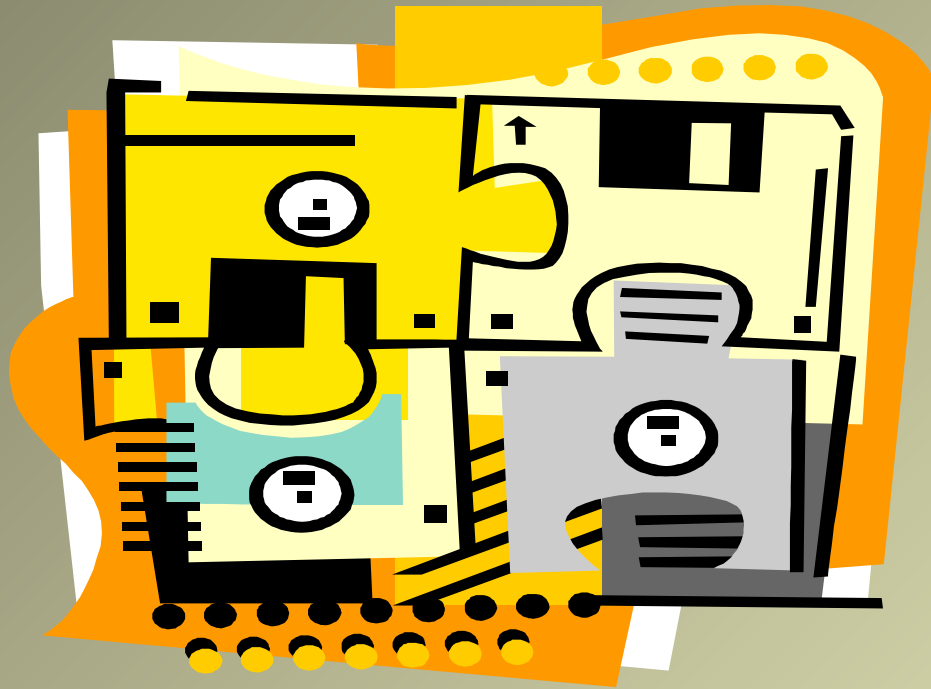
## The International Scene

# Across the Pond



The European  
aerospace industry  
has been  
collaborating  
internationally on  
technical  
documentation for  
many years and  
with good reason

# Daddy...Where do european planes come from?



Planes aren't created in just one country Jimmy

Different parts of the airplane are made in different countries, and the documentation comes together in many pieces.

# Enter S1000D



The Common Source Database (CSDB) is the container (repository), and there's a distinct naming convention, and a DTD, and all kinds of stuff.

# We have that stuff too!

- Army
  - TACOM (EMS2)
  - [CECOM \(Open Source\)](#)
  - AMCOM (IADS)
  - Picatinny (AIMSS)
- Navy (which navy?)
- AirForce
  - 38784 (1-64)
  - 87269 (A,B,E...)

Wouldn't it be nice if there was just one solution we could all use?

Yeah, then we could have interoperability and all that other stuff we've been talking about for years and years

**Maybe we have too much stuff!**

# OSD Policy Memo

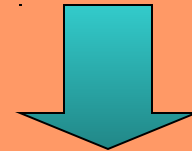


Coming this summer (so I've been informed) will be a requirement for all services to come up with a migration plan for moving to S1000D

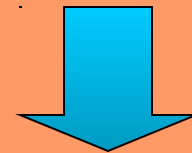
# Whatcha talkin' 'bout Willis?!



CECOM 2361A Variant



Mil-Std-2361C



S1000D

# CECOM & S1000D

Work in progress



- Land & Sea Requirements
- Additional Functionalities
- Working Group Participation
- Logic Engine Prototype (Hua Lin)

Wrap it up!

Why I like IETMs

# It Doesn't Matter What I Like!

## Comments From the Field



# Who's who?

- Gary Salomon x22224 (Branch Chief and Pubs Control Officer)
- Melanie Flavin x27716 (Project Management)
- Hua Lin x76375 (Computer Science Specialist)
- Bill Parke-Combes x25391 (Computer Science Specialist)